

A SMALL ADULT *PALORCHESTES* (MARSUPIALIA, PALORCHESTIDAE) FROM THE PLEISTOCENE OF THE DARLING DOWNS, SOUTHEAST QUEENSLAND. *Memoirs of the Queensland Museum* 51(1): 202. *Palorchestes* is a rare component of the Australian fossil record with late Tertiary origins (Black, 1997). Several species have been described, including: *P. painei* Woodburne 1967 (Late Miocene); *P. anulus* Black 1997 (Late Miocene); *P. selestiae* Mackness 1995 (early Pliocene); *P. parvus* De Vis 1895 (Plio-Pleistocene); and *P. azael* Owen 1874 (Pleistocene). Recent collecting from a late Pleistocene deposit on the eastern Darling Downs, SEQ, recovered a small dentary not referable to those species of *Palorchestes* where the dentary is known.

Family PALORCHESTIDAE Tate, 1948

Palorchestes Owen 1873

Palorchestes sp. (Fig. 1)

Material. QMF49455, edentulous right dentary. QML796, Kings Creek, near Clifton, eastern Darling Downs; late Pleistocene (see Price, 2004).

Description. Dentary broken anteriorly at I₁ alveolus, posteriorly below M₃ anterior alveolus; edentulous (excepting for in situ, broken, heavily worn protolophid of M₂); gracile, tapering anteriorly; anterior portion flared buccally; symphysis elongate, ankylosed; mental foramen anteroventral to P₃; diastemal ridge well defined, lingually offset, concave lingually. Alveoli measurements in mm: P₃: 16.3L × 12.7W, M₁: 18.6L × 10.9W, M₂: 20.5L × 13.6W.

Remarks. The dentary is referred to *Palorchestes* based on the combination of its large size; presence of lophids; long and narrow symphyseal region; gently tapered anterior; and buccally flared diastema. The ankylosed symphysis, heavily worn protolophid of M₂ and presence of P₃ alveoli indicates that the individual was an adult. Therefore, morphological differences between QMF49455 and other *Palorchestes* species are unlikely to be ontogenetic. Measurements of alveoli suggest that the teeth were similar in size to *P. parvus*. However, QMF49455 differs from *P. parvus*, *P. azael* and *P. painei* by being more gracile with an anterior margin more buccally flared; diastemal ridge better defined and lingually concave; and diastema proportionately shorter. Comparison to *P. selestiae* and *P. anulus* is not possible as those species are known only from the M¹. Black (1997) shows *P. selestiae* to be markedly larger and *P. anulus* to be smaller than *P. parvus*. Hence, QMF49455 may represent an undescribed,

small species of *Palorchestes* or sexual dimorphism within small-sized *Palorchestes* spp.

Palorchestes spp. generally occur allopatrically showing a trend of increased body size from the mid Tertiary to the late Pleistocene (Murray, 1991). QMF49455 is unusual in being a small adult *Palorchestes* from the late Pleistocene. A second species of *Palorchestes*, also recovered from QML796 and represented by a R1₁, is referable to *P. azael* (QMF33024). Sympatry in *Palorchestes* spp. has been noted by Davis & Archer (1997), however, those occurrences may be due to temporally mixed faunas. Here we confirm sympatry of two *Palorchestes* species during the late Pleistocene.

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FIG. 1. QMF49455, *Palorchestes* sp. right dentary. A, occlusal view. B, lateral view.